

What is claimed is:

1. A door locking system comprising:
an assembly including a latching structure having a first engagement
5 surface and a first overlap surface;
a door movably coupled to the assembly, the door including a latch
member having a second engagement surface and a second overlap surface,
the door having a closed position in which the first engagement surface at
least partially contacts the second engagement surface and the first overlap
10 surface at least partially overlaps the second overlap surface, the second
engagement surface required to move beyond the first engagement surface in
order to close and open the door; and
a movable member capable of generating a force against at least one of
the assembly and the door to press together and substantially prevent
15 disengagement of the first engagement surface and the second engagement
surface.
2. The door locking system according to claim 1, wherein the first
engagement surface forms an undercut.
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3. The door locking system according to claim 2, wherein the second
engagement surface forms a projection for engaging the undercut.
4. The door locking system according to claim 1, wherein the latch
25 member includes a post extending from the door, the post including the
second engagement surface.
5. The door locking system according to claim 1, wherein the latch
member includes a handle for operating the latch, the handle capable of
30 pivoting to control alignment of the second engagement surface.

6. The door locking system according to claim 5, wherein the handle is substantially incapable of pivoting when the first engagement surface is engaged with the second engagement surface and the movable member is generating force against one of the door and the assembly.

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7. The door locking system according to claim 1, wherein the movable member is capable of generating a continuous force against the at least one of the assembly and the door.

10 8. The door locking system according to claim 1, wherein the movable member is coupled to one of the door and the assembly.

9. The door locking system according to claim 1, wherein the movable member is positioned between the door and a surface of the assembly.

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10. The door locking system according to claim 1, wherein the movable member is an expandable member.

11. The door locking system according to claim 10, wherein the
20 expandable member is a bladder.

12. The door locking system according to claim 1, further including a pneumatic circuit for controlling the movable member.

25 13. The door locking system according to claim 1, wherein the assembly includes a control element for operating a pump cassette.

14. The door locking system according to claim 13, wherein the control element includes:

30 a bezel; and

a bezel gasket including a membrane capable of being displaced so as to operate the pump cassette.

15. The door locking system according to claim 14, further including a
5 pneumatic control circuit for displacing the membrane.

16. The door locking system according to claim 13, further including a cassette receptacle movably coupled to one of the door and the assembly, the cassette receptacle capable of receiving the pump cassette.

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17. The door locking system according to claim 16, wherein the movable member is capable of pressing the cassette against the control element.

18. The door locking system according to claim 1, wherein the movable
15 member contacts the at least one of the assembly and the door.

19. The door locking system according to claim 1, further comprising an element positioned between the movable member and the at least one of the assembly and the door, wherein the movable member contacts the element
20 when generating the force.

20. The door locking system according to claim 19, wherein the element is a pump cassette.

25 21. A door locking system comprising:
an assembly having a first engagement means;
a door coupled to the assembly, the door including a second engagement means for engaging the first engagement means; and
movable means for generating a force against at least one of the
30 assembly and the door to press together and substantially prevent

disengagement of the first engagement surface and the second engagement surface.

22. The door locking system according to claim 21, wherein the first
5 engagement means includes a surface forming an undercut, and the second engagement means forms a projection for engaging the undercut.

23. The door locking system according to claim 21, further including a handle attached to the second engagement means.

10 24. The door locking system according to claim 21, wherein the movable means includes an expandable member.

25. The door locking system according to claim 24, wherein the
15 expandable member is a bladder.

26. The door locking mechanism according to claim 21, further including a pneumatic circuit for controlling the moving member.

20 27. The door locking system according to claim 21, wherein the assembly includes control means for operating a pump cassette.

28. The door locking system according to claim 27, wherein the control means includes:

25 a bezel; and
a bezel gasket including a membrane capable of being displaced so as to operate the pump cassette.

29. The door locking system according to claim 28, further including a
30 pneumatic control circuit for displacing the membrane.

30. The door locking system according to claim 18, where the movable means is positioned between the door and the assembly.

31. The door locking system according to claim 21, wherein the movable means is capable of contacting and pressing against the at least one of the assembly and the door.

32. The door locking system according to claim 21, further comprising an element positioned between the movable means and the at least one of the assembly and the door, wherein the movable member contacts the element when generating the force.

33. The door locking system according to claim 32, wherein the element is a pump cassette.

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34. A door locking method comprising:
providing an assembly including a latching structure having a first engagement surface and a first overlap surface, the assembly coupled to a door, the door including a latch member having a second engagement surface and a second overlap surface, the door having a closed position in which the first engagement surface at least partially contacts the second engagement surface and the first overlap surface at least partially overlaps the second overlap surface, the second engagement surface required to move beyond the first engagement surface in order to close and open the door; and
moving a movable member to generate a force against at least one of the door and the assembly to press together and substantially prevent disengagement of the first engagement surface and the second engagement surface.

35. The door locking method according to claim 34, wherein the first engagement surface forms an undercut and the second engagement surface forms a projection for engaging the undercut.

5 36. The door locking method according to claim 34, further comprising controlling a handle to operate the latch member.

37. The door locking method according to claim 36, wherein prior to moving the movable member the method further comprising:

10 closing the door; and

moving the handle such that the second engagement surface of the latch member is aligned to engage the first engaging surface.

38. The door locking method according to claim 36, further comprising:
15 moving the movable member away from the one of the door and the assembly;

moving the handle such that the second engagement surface is in non-alignment to engage the first engaging surface; and
opening the door.

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39. The door locking method according to claim 34, wherein moving the movable member against one of the assembly and the door includes expanding an expandable member.

25 40. The door locking method according to claim 39 wherein the expandable member is a bladder, and expanding the expandable member includes pneumatically operating the bladder.

41. The door locking method according to claim 34, wherein a cassette
30 receptacle is attached to one of the door and the assembly, the method further comprising:

inserting a pump cassette into the cassette receptacle.

42. The door locking method according to claim 41, wherein the assembly includes a membrane capable of being displaced, the method further
5 comprising pneumatically displacing the membrane to operate the pump cassette.

43. The door locking method according to claim 41, wherein moving the movable member includes moving the movable member against one of the
10 pump cassette and the cassette receptacle to press the pump cassette against the membrane.

44. The door locking method according to claim 34, wherein moving the movable member includes placing the movable member in contact with the at
15 least one of the assembly and the door.

45. The door locking method according to claim 34, wherein moving the movable member includes placing the movable member in contact with an element positioned between the at least one of the assembly and the door,
20 such that a force is generated on the at least one of the assembly and the door.

46. The door locking method according to claim 45, wherein the element is a pump cassette.